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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/530,472

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EXAMINER

NOORISTANY, SULAIMAN

ART UNIT

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2146

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/530,472	Applicant(s) SAFFRE, FABRICE TP	
	Examiner SULAIMAN NOORISTANY	Art Unit 2146	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-6,8-12,14-17,19,27 and 29-31 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1,3-6,8-12,14-17,19,27 and 29-31 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|----------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>07/08/2005</u> . | 6) <input type="checkbox"/> Other: ____. |

Detailed Action

This Office Action is response to the application (10/530472) filed on 21, Oct 2003.

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 1/18/08 has been entered.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

Claims 1, 3-6, 8-12, 14-17, 19, 27, 29-31 are rejected under 112, second paragraph as being indefinite for failing to particularly point and distinctly claim the subject matter which applicant regards as the invention

As per claim 1, line 14, the term "attempting to initiate" is indefinite and unclear (i.e., it fails to disclose the steps that how does it performs?).

As per claim 12, line 16, the term "attempting to initiate" is indefinite and unclear (i.e., it fails to disclose the steps that how does it performs?).

As per claim 31, line 11, the term "attempting to initiate" is indefinite and unclear (i.e., it fails to disclose the steps that how does it performs?).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a), which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3-6, 8-12, 14-17, 19, 27, 29-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Gregerson**. US Patent No. **US 5,699,351** further in view of in view of **O'Toole**. US Patent No. **US 7,117,273**.

Regarding claims 1, 12 & 31, Gregerson teaches wherein a node for a network, the network comprising a hierarchical structure in which a node is considered to be at a higher level than a parent node to which it connects when joining the network, the network having a topology type in which each node joining the network is considered by the same connection rules, the node being adapted to join the network by applying said connection rules, the rules comprising:

identifying a parent node at a lowest level in the network that is able to maintain secondary connections to other nodes in the network of the same lowest level (**Fig. 9, 14**);

attempting to initiate and maintain a specified number $k-1$ of further secondary connections between the node and other nodes in the network having the same level in the hierarchy as the node **(A kernel at level n is termed to be a child of its parent kernel at level $n+1$ provided that two kernels have the same name above level n – Col. 7, lines 41-44).**

However, Gregerson is silent in terms of *terminated and reallocated of the nodes*.

O'Toole teaches that is well known to utilize by requesting one of the secondary connections of the parent node to other nodes in the network of the same level to be terminated and reallocated to the node if the identified parent node has no free links to become a primary connection between the identified parent node and the node at a lower level in the network hierarchy **(Each child node periodically checks in with its parent nodes, and the parent nodes can thus determine when a child node has terminated a relationship with the parent or created “here is same as re-allocated” a new relationship with a new parent -- Abstract)** and

the node advertise a spare connection thereby attempting to maintain k connections to each node **(broadcasting and the Alt-route – Fig. 2).**

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Gregerson's invention by using the system of a network in which nodes such as a host, a hub, router, etc. are interconnected, each node is indicated by an icon, and the connection between the nodes is indicated by a line. A node to be regarded is positioned in the center of the map as a root, and a node directly connected to the root is arranged as a node at the second hierarchical level on the

circumference of the circle with the root centered. Similarly, the network configuration is assumed to be a hierarchical structure with the root centered, where the root can receive change information, because each child node in the node tree periodically checks in with its parent and reports its status to the parent, as well as information on the status of descendants of the child in the network. For example, a new parent of a child reports a creation signal (e.g., creation of a relationship between the node and a child) when a child node connects to a new parent node. A parent node can also generate a termination relationship signal (e.g., termination of a relationship between the node and a child) when one of its child nodes ends the relationship with the parent node (e.g. stops checking in). At a higher level in the tree, if an intermediate node (e.g., parent node intermediate between lower level parents and the root) receives several creation and termination signals for a lower level node (e.g., a child node that has moved several times), it can report only the most recent creation and termination signals to higher level nodes in the network. Thus, the root only receives the creation and termination signals that are most recent for a given node (e.g., child node). In addition, the node that received the change relationship signal locates an entry in the map corresponding to the parent node, and updates the entry for the parent node to indicate that the child node is no longer a child of that parent node, where this indicates that there was spare or free link created and would be available to accept the new child node which were from depended on different parent nodes or failed their connectivity with their parent node, as taught by O'Toole.

Regarding claims 3 & 14, Gregerson and O'Toole together taught the method of a node as in claims 1, 12 & 31, above. Gregerson further teaches wherein to attempt to maintain the specified number of k-1 further connections between the node and other nodes in the network by periodically carrying out:

for each unallocated one of the k-1 connections, selecting a node from one or more candidate nodes, and forming a connection with the selected node **(A kernel enters the network by running the Login process to locate its parent kernel, Col. 7, Lines 56-67)**,

O'Toole further teaches wherein until either the k-1 further connections have been successfully completed or there are no more candidate nodes **(Fig. 2)**.

Regarding claims 4 & 15, Gregerson and O'Toole together taught the method of a node as in claims 1, 12 & 31, above. Gregerson further teaches wherein the step of selecting the peer node comprises selecting the peer node at random from the one or more candidate nodes **(The present invention is a dynamic, Symmetrical, distributed, real-time, peer-to-peer system comprised of an arbitrary "here is same as random" number of identical, Col. 2, Lines 46-53)**.

O'Toole further teaches **(nodes are chosen at random – Col. 31, lines 26-27)**.

Regarding claims 5 & 16, Gregerson and O'Toole together taught the method of a node as in claims 1, 12 & 31, above. Gregerson further teaches wherein the step of selecting the node comprises selecting the node on the basis of the range of the

candidate nodes to the node **(The configuration parameter MaxStatus imposes a ceiling on the highest level of which the kernel can be a manager. A kernel at level n is termed to be a child of its parent kernel at level n+1 -- Col. 7, Lines 39-44).**

Regarding claims 6 & 17, Gregerson and O'Toole together taught the method of a node as in claims 1, 12 & 31, above. Gregerson further teaches wherein the network comprises an overlay network formed over an underlying network of nodes **(Fig. 14, underlying mix of physical topologies -- Col. 2, Lines 59-60)**, and wherein the range between a candidate node and the node comprises the number of links between them in the underlying network **(A kernel at level n is termed to be a child of its parent kernel at level n+1 provided that the two kernels have the same name above level n -- Col. 7, Lines 39-44).**

Regarding claims 8 & 19, Gregerson and O'Toole together taught the method of a node as in claims 1, 12 & 31, above. O'Toole further teaches wherein to identify another node as a prospective parent node on the basis of the range of the other node to the node **(Fig. 1, unit 33 – sample map).**

Regarding claims 9 & 20, Gregerson and O'Toole together taught the method of a node as in claims 1, 12 & 31, above. O'Toole further teaches wherein to identify another node as a prospective parent node if it is within a specified range of the node **(Fig. 1,**

unit 33 – sample map).

Regarding claims 10 & 21, Gregerson and O'Toole together taught the method of a node as in claims 1, 12 & 31, above. Gregerson further teaches wherein in the event that the primary connection fails **(PLN employs a system of "heartbeat" messages, which is used to monitor the status of nodes within the network and identify network failures, Col. 6, Lines 22-24).**

O'Toole further teaches wherein in the event that the primary connection fails to re-establish a primary connection with another node which is at a lower level in the network hierarchy than the node **(Fig. 2).**

Regarding claims 11 & 22, Gregerson and O'Toole together taught the method of a node as in claims 1, 12 & 31, above. Gregerson further teaches wherein in which the specified number k of connections is substantially the same for every node **(A kernel at level n is termed to be a child of its parent kernel at level n+1 provided that the two kernels have the same name above level n, Col. 7, Lines 39-44; The present invention is a dynamic, Symmetrical, distributed, real-time, peer-to-peer system Col. 2, Lines 46-53)).**

Regarding claims 23 & 26, Gregerson and O'Toole together taught the method of a node as in claims 1, 12 & 31, above. O'Toole further teaches wherein a tangible data store containing a computer program comprising instructions for causing one or more

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processors to operate as the node when the instructions are executed by the processor or processors **(Fig. 1, unit 33 – 24 NODE D)**.

Regarding claims 24 & 27, Gregerson and O'Toole together taught the method of a node as in claims 1, 12 & 31, above. O'Toole further teaches wherein a storage medium carrying computer readable code representing instructions for causing one or more processors to operate as the node when the instructions are executed by the processor or processors **(Fig. 1, unit 33 – 24 NODE D)**.

Regarding claims 29 & 30 Gregerson and O'Toole together taught the method of a node as in claims 1, 12 & 31, above. O'Toole further teaches wherein the node is adapted to:

upon receipt of a request from a further node desiring to form its primary connection with the node and in the event that none of the $k-1$ of further connections of the node is unallocated, then to: select one of the further $k-1$ connections which is not a primary connection for one of the other nodes; and to re-allocate that selected further connection to the further node so as to form the primary connection for the further node **(The technique includes identifying resources that join the network by switching from an inactive to an active state; and informing the requester the availability of the requested resource, Abstract, Lines 8-11)**.

Response to Arguments

Applicant's arguments with respect to claims 9-28 have been fully considered but they are moot in view of the new ground(s) rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sulaiman Nooristany whose telephone number is (571) 270-1929. The examiner can normally be reached on *M-F** from 9 to 5. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeff Pwu, can be reached on (571) 272-6798. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Sulaiman Nooristany 05/06/2008

/Joseph E. Avellino/

Primary Examiner, Art Unit 2146